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ABSTRACT

This study explores how residential segregation can be thought of in terms of an economic competition theory of minority-group relations. The model proposed is considered applicable to the American South, and with some modification, relevant to other settings. The objectives are: (1) to show that residential segregation indices are related to measures of educational, occupational, and income inequality; and, (2) to demonstrate how the residential segregation factor may be incorporated into an economic competition theory of minority-group relations. Data were drawn from a sample of Southern cities. The results suggest that residential segregation is important not only for its direct effects on educational inequality but upon occupational inequality as well. In terms of the competition model, the findings pertaining to residential segregation raise some questions as to whether it is the minority percentage itself or the dispersion of that minority which results in producing a perceived minority threat. (Author/JW)

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RESIDENTIAL SEGREGATION OF BLACKS AND RACIAL INEQUALITY IN SOUTHERN CITIES: TOWARD A CAUSAL MODEL

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RESIDENTIAL SEGREGATION OF BLACKS AND RACIAL INEQUALITY IN SOUTHERN CITIES: TOWARD A CAUSAL MODEL

Residential segregation of blacks and whites in American cities is a subject that has attracted considerable attention in recent years. At a time when phenomenal changes in black-white relations are occurring, several researchers have singled out the factor of residential segregation as one of pivotal importance. Notable among these are Taeuber and Taeuber, whose work (1965) clearly delineates the persisting reality of residential segregation by color in contemporary American cities.

While the demographic aspects of this phenomenon are well-known, less attention has been given to residential segregation as a factor worthy of consideration in theories of minority-group relations. Lieberson, in formulating testable theories of assimilation, has shown that this dispersion factor is salient. With data on immigrant groups in ten American cities, he shows that degree of residential segregation does significantly affect the rates of assimilation into the host society (1961; see also Duncan and Lieberson, 1959). Apart from this theoretical tradition, few efforts have been made to demonstrate the importance of the residential segregation factor in developing testable theories of minority-group relations.

This paper represents an effort in theory construction. It is an exploratory investigation of how residential segregation as a variable may be conceptualized in an economic competition theory of minority-group relations. The model proposed is applicable to the American South, although with some modification should be relevant to other settings. The objective is two-fold: (1) to show that residential segregation indices are

related to measures of educational, occupational, and income inequality; and (2) to demonstrate how the residential segregation factor may be incorporated into an economic competition theory of minority-group relations. Since our foremost concern is with the theoretical implications, we shall focus most of the attention on the latter objective.

Residential Segregation, Competition, and Inequality

Aside from the implications for assimilation, numerous social scientists concerned with race and minority relations have alluded to the importance of residential segregation as a factor. The causal implications are not always explicitly stated, but generally, there are two fundamental ways in which residential segregation is thought to be important for inter-group relations: (a) as a basis for institutional and organizational separation, and (b) as a factor accenting the differences between groups by heightening their visibility.

According to the first, residential segregation enables a group to develop and maintain separate structures which may serve as the basis for institutionalized inequality. Myrdal (1944:618) described residential segregation as "basic in a mechanical sense" to other forms of discrimination. Likewise, Hawley (1944) notes that the viability of group structures is dependent upon group isolation. In his comparative studies on race relations, van den Berghe argues that physical segregation replaces social distance as traditional paternalism declines and members of both groups engage in greater competition for societal rewards (1967:30). Separate institutions, fostered and preserved under conditions of residential isolation, facilitate unequal and discriminatroy practices. Discriminatory school budget allocations (McEntire, 1960:89) and reduced

opportunities for inter-group contacts (Williams, 1964:132) are cited as consequences.

The second fundamental way in which residential segregation functions is to increase minority visibility. Little research has been directed specifically to this. Kephart's finding that the greater the number of Negroes arrested in a district in Philadelphia, the greater the overestimation by policemen of the Negro rate, suggests that visibility increases at a more rapid rate than sheer number (1954). Although residential segregation itself has received little attention, existing competition theories of minority-group relations do acknowledge the importance of the visibility factor. Blalock, for example, observes that increased minority visibility accents perceived minority competition (1967:102). According to his reasoning, the motivation to discriminate is a function of both the actual and perceived economic threat. In the Blalock model, minority percentage is conceptualized as a measure of both of these aspects.

Causal Model for Testing

If the above reasoning about the effects of residential segregation is correct, then certain implications follow that should be important in testable theories. Residential concentration of blacks should result in stronger institutional supports for inequality and in heightened sense of minority threat. With the latter, it is proposed that degree of residential segregation may be conceptualized as an "intervening" variable linking the effects of minority percentage upon motivations to discriminate. By implication, the perceived threat component is regarded as particularly salient.

Previous research supporting the formalization of minority-group relations theory in this manner are Taeubers' findings that percent non-white and residential segregation are positively related (1964:47) and Bahr and Gibbs' findings that residential segregation is related to educational, occupational, and income inequality measures (1967). Age of city is also related negatively to residential segregation in southern cities (Schnore and Evenson, 1966). The inclusion of this latter variable is particularly appropriate in a southern study in view of van den Berghe's point about the emergence of the residential segregation factor as race relations evolve from paternalistic to competitive conditions.

Combining all the variables in a logical and predictive order, the following simple chain model is proposed:

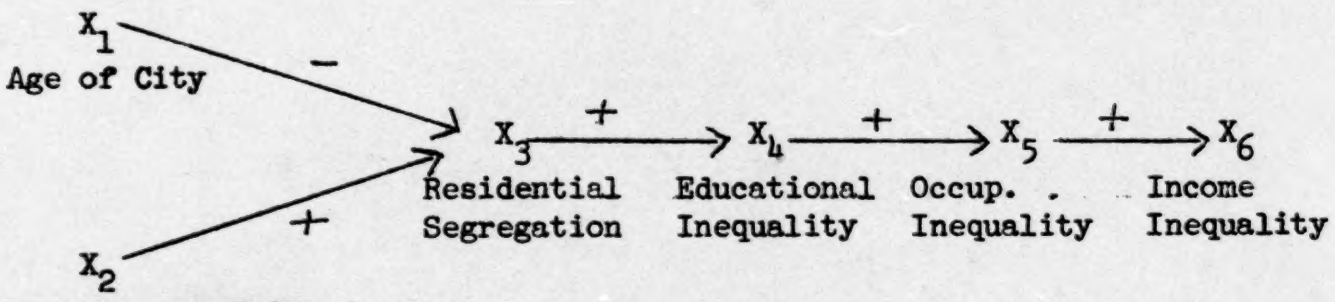

Figure 1. Model I

The predictions which follow from this proposed model are listed in Table 2 along with the examination of the first set of findings. The model is assumed to be recursive, i.e., causation is one-way. Measurement error is assumed to be negligible. Finally, it must also be assumed that variables left out of the system are not producing confounding effects which disturb the underlying ordering of variables.[1]

Sample and Methodology

A sample of 100 cities was randomly selected from a universe of all incorporated places of 50,000 or more inhabitants in the U.S., having at least 1,000 non-white housing units for which block statistics were collected in the 1960 Census of Housing. Thirty-eight cities were southern by definition of the U.S. Census Bureau, and it is these city units on which the present analysis is based.

Degree of residential segregation was measured by an "index of dissimilarity" (Duncan and Duncan, 1955). This index assumes values from 0 to 100 and represents the minimum percent of either racial group who would have to change the block on which they live in order to produce an unsegregated distribution. The index scores were computed on the basis of block statistics available only for central cities.

Percent non-white was taken directly from the census. Age of city was measured using the number of decades since the city reached 50,000 inhabitants. With the three inequality measures, inequality in each instance was

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[1]For further discussion of the assumptions of causal model testing, see Blalock (1961).

indexed as the difference between whites and non-whites for each city unit. Educational inequality is defined as the percentage difference between whites and non-whites of males twenty-five and over with more than six years of education. Occupational inequality is measured by taking the percentage difference between the two groups of males 14 years of age and over, employed in professional, managerial, clerical, and sales jobs. Income Inequality is measured by the percentage difference of males 14 years of age and over with an income of $1,500 or more.[2]

Following conventional procedures, non-white is used as comparable to Negro. For a southern sample, the errors resulting from this should not be severe.

Interval measures are assumed for all variables and Pearson correlations used as measures of association.

Findings

Table 1 presents the zero-order associations among all pairs of variables. Few of the correlations are strong, but the expected patterns are found. The residential segregation index is positively associated with the three inequality measures, somewhat more so than percent non-white. Age of city, as expected, is negatively associated to the residential segregation index and the inequality measures. The older the southern city, the lower the levels of residential segregation and status inequalities.

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[2]Computed from U.S. Bureau of the Census, U.S. Census of Population 1960, Vol. I: Characteristics of the Population, Tables 77 and 78.

TABLE 1. ZERO-ORDER CORRELATION COEFFICIENTS AMONG VARIABLES

Variable	1	2	3	4	5	6
(1) Age of City		.061	-.231	-.542*	-.205	-.344*
(2) Percent Non-white			.279	.174	.146	.178
(3) Residential Segregation				.367	.415*	.293
(4) Educational Inequality					.504*	.637*
(5) Occupational Inequality						.370*
(6) Income Inequality						

*Statistically significant at .05 level.

Having found the expected zero-order associations, we turn next to the predicted partial correlations. The predictions and degrees of fit are shown in Table 2. Notice that among those predictions that are reasonably good are Predictions 1 (percent non-white and age of city unrelated) and the set of predictions involving percent non-white as independent variable (Predictions 5, 6, and 7). Except for Prediction 7, the data indicate a great deal of support for viewing residential segregation as intervening between percent non-white and the inequality measures.

Apart from these, the other predictions are less satisfactory. The expected relationship between age of city and educational inequality intervening through residential segregation is not supported. Rather than vanishing, the partial correlation is greater than the zero-order correlation. In fact, the entire set of predictions involving age of city (Predictions 2, 3, and 4) is unsatisfactory. Neither do the findings support the simple chain model conception involving residential segregation and the inequality measures. The pivotal linkage expected was that educa-

TABLE 2. PREDICTIONS AND DEGREES OF FIT FOR PROPOSED MODEL

Predictions		Degrees of Fit	
		Actual	Expected
Prediction 1:	$r_{12} = 0$	.061	0
Prediction 2:	$r_{14.3} = 0$	-.693	0
Prediction 3:	$r_{15.3} = 0$	-.123	0
Prediction 4:	$r_{16.3} = 0$	-.443	0
Prediction 5:	$r_{24.3} = 0$	.070	0
Prediction 6	$r_{25.3} = 0$	.034	0
Prediction 7:	$r_{26.3} = 0$	.104	0
Prediction 8:	$r_{35.4} = 0$	.286	0
Prediction 9:	$r_{46.5} = 0$	.558	0
Prediction 10:	$r_{36} = r_{34}r_{45}r_{56}$	.293	.068 = (.37)(.50)(.37)

tional inequality intervenes between residential segregation and occupational discrimination. The data show that the partial correlation ($r_{35.4}$) is .29. Predictions 9 and 10 also indicate that the proposed model is unsatisfactory.

In order to arrive at a more satisfactory approximation of the data, several modifications were introduced into the model. The discrepancies found in Model 1 resulted in the following changes: (a) a direct linkage between age of city and educational inequality; (b) a direct linkage between residential segregation and occupational inequality; and (c) a direct linkage between educational inequality and income inequality.

These changes (dotted lines) are shown in Model II:

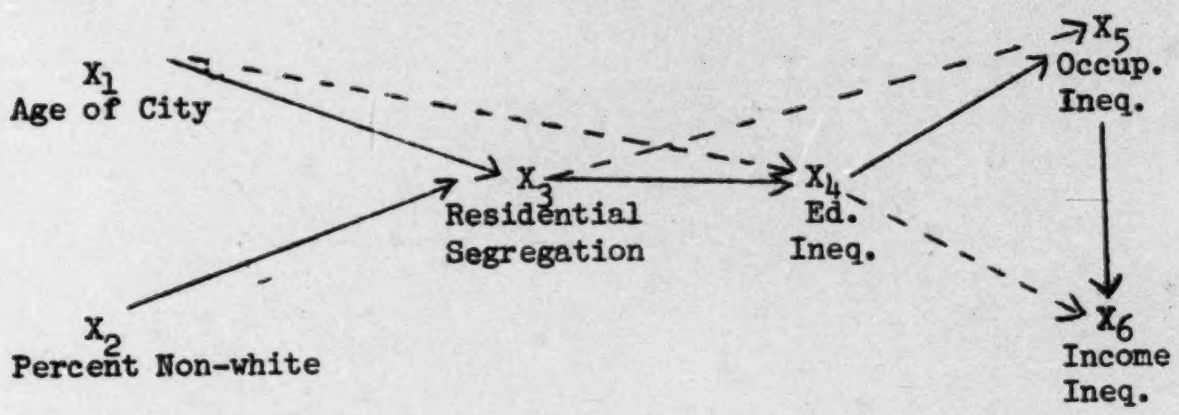

Figure 2. Model II

As is seen in Table 3, the predictions which follow from this model are much more satisfactory. All of the predictions involving age of city are now reasonably good. Controlling for residential segregation and educational inequality, the partials between age of city and the other two inequality measures reduce to approximately zero. By linking residential segregation and occupational inequality directly, one is able to get a better-fitting set of predictions involving percent non-white. Also, by linking directly educational and income inequalities, we arrive at a much more satisfactory model of the causal relationships.

The partial $r_{26.3}$ is least satisfactory. One could reason that an arrow linking percent non-white and income inequality should be inserted. We have not done this because of the relatively good predictions found when either educational inequality or both educational inequality and residential segregation are controlled. Since the sample is small and the effects of measurement error unknown, it is reasoned that since our predictions as a whole are reasonably good we should assume that extraneous factors may be operative here.

TABLE 3. PREDICTIONS AND DEGREES OF FIT FOR MODEL II

Predictions	Degree of Fit	
	Actual	Expected
$r_{12} = 0$	.061	0
$r_{15.34} = 0$	.008	0
$r_{16.4} = 0$	-.003	0
$r_{16.34} = 0$	-.002	0
$r_{16.45} = 0$	-.063	0
$r_{16.345} = 0$	.000	0
$r_{25.3} = 0$	.034	0
$r_{25.34} = 0$	.005	0
$r_{24.3} = 0$	.070	0
$r_{26.3} = 0$	.104	0
$r_{26.4} = 0$	.088	0
$r_{26.34} = 0$	.077	0
$r_{26.345} = 0$	.065	0
$r_{36.45} = 0$	.033	0

Summary and Discussion

This paper has presented data for the evaluation of how the residential segregation factor can be incorporated into an economic competition model of minority-group relations. Data for a sample of southern cities were examined. Although the exploratory chain model was unsatisfactory on several counts, a reasonably good set of partial correlation predictions was obtained after a number of modifications were made.

Perhaps the modification made with the most implications refers to the relationship between residential segregation and occupational inequality. The data suggest that residential segregation is important not only for its direct effects on educational inequality but upon occupational inequality as well. Motivational factors with respect to work, apart from those affecting education, may be affected by ghetto life. Also, if the theories of van den Berghe and others are correct, it may be that the stronger institutional supports for inequality in the larger, more concentrated ghettoes make it more difficult for blacks with educational qualifications to find jobs. Measurement error is no doubt involved here too, since the census measure used is a quantitative one and ignores the actual quality of the education involved.

Even with the modifications, however, the data provide support for the conceptualization of residential segregation as an intervening variable between percent non-white and the inequality measures. With the residential segregation measure controlled (Model II), the relevant partial correlations involving both age of city and percent non-white reduce to approximately zero as expected. In constructing an economic competition model of minority-group relations, our findings pertaining to residential segregation raise some question as to whether it is the minority percentage itself or the dispersion of that minority which results in producing a perceived minority threat. More research is needed for examining the relation of these two variables and their effects, either separately or jointly, upon perceived threat and competition. Possibly, a joint-effects model (high percent minority and high level of residential concentration) would best approximate the actual reality.

A feedback model where some allowance is made for the effects of status inequalities upon residential segregation should be explored.

Nevertheless, the data presented do suggest that the residential segregation factor is salient and can be incorporated into existing minority theories. Further analysis along the lines suggested should reveal its theoretical significance for black-white relations outside the American South as well.

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